

November 9, 1965

Dr. Philip H. Abelson  
Director, Geophysical Laboratory  
Carnegie Institution  
2801 Upton Street, N. W.  
Washington 8, D. C.

Dear Phil:

Thank you for your consideration in sending me an advance copy of your article.

Quite apart from the issues you raise now, I feel too much emphasis has been placed on the free atmosphere as the site of organic synthesis. I have in mind the soil-atmosphere interface, with adsorbed reactants. We certainly do not know the radiation flux at the actual surface. Furthermore, I have tried for a long time\*, without much success, to stir up more interest in the organic synthesis of the pre-planetary aggregation. No lack of hydrogen there!

You do write off the hot springs rather brusquely in relation to what could be expected to be seen by Mariner 4. There is a lot of unexplained detail, and I find most people interpret this exactly in accord with their preconceptions.

I congratulate you for a forthright statement about the composition of Mars. I only hope you are not so persuasive about your foreknowledge that we never find out whether you are right or not. For myself, I would like to see many more pictures at better resolution before I make any assertions as to what is or is not definitely there.

Sincerely yours,

Joshua Lederberg  
Professor of Genetics

\*Lederberg, J. and D. B. Cowie, 1958. Moondust. Science 127:1473-5.

ABELSON